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Remarks

Claims 1 through 7 and claims 9 through 18 remain pending in the application. Claims are amended.

The Office Action rejects claims 1 through 7, 9 and 18 as as anticipated by Lach, et al., Resuscitation Method and Apparatus, U.S. Patent 4,770,164 (Sep. 13, 1988) under the assertion that Lach stops his motor at a desired threshold of tightness and that Lach teaches "an electrical holding circuit that causes the motor to stop at the desired maximum tightness" and, therefore, this comprehends the claimed high threshold hold of the claims.

The rejection misunderstands the operation of Lach. Lach does not describe "an electrical holding circuit that causes the motor to stop at the desired maximum tightness." Lach actually states:

One or two cam-operated circuit interrupter switches can be associated 65 with the shaft that drives the socket 172, cooperating with a suitable electrical holding circuit to cause the electric motor, for example, to stop with the socket 172 in the desired maximum-tautness or maximum looseness position.

It is clear from the passage in which Lach mentions the holding circuit that it is the cam-operated circuit interrupter switches that stop and start the motor. The holding circuit merely holds the motor circuit closed, until interrupted. As explained in the prior office action response, the term "holding circuit," when used in relation to motors, refers to a circuit which holds a relay switch closed until interrupted, using the power supplied to downstream circuit elements (the motor) to keep the

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relay energized. It is a common term with a certain meaning. The examiner might be familiar with holding circuits generally. Holding circuits are used in table saws, so that a user can turn on the motor and feed wood without the need to keep the start button pressed down (operation of a table saw would be quite cumbersome without a holding circuit), and, of course, prevent the table saw from starting up after a power failure (operation of a table saw would be quite dangerous without a holding circuit). Holding circuits are avoided in hand-held power drills: the drill turns off when the user releases the starting switch, so that it won't keep drilling if the user drops it. Holding circuits are used in large breakers, to make sure they open on loss of power so that large loads will not start up inadvertently on restoration of power. A food processor might use both: a holding circuit for continuous operation and a momentary switch for pulse operation. Various other motors are typically operated with holding circuits or without holding circuits, according to the requirements for maintaining the motor in operation without the need to continuously press the start button. (Exemplary usages are seen in U.S. Patent 6938415, US. App. 20050142508 (Figure 3, item 5), U.S. App. 20050141910 (Figure 1, relay S and item 30), U.S. App. 20050122068 (Figure 5), U.S. Patent 6744609 (item 11), U.S. Patent 6864445, U.S. Patent 4,933,799 (items C03, C1 and C2). Using such a holding circuit, Lach keep his motor energized even after it loses contact with the starting cam-operated switch, and keeps the necessary relay closed until the stopping cam-operated switch hits his mechanical stop, in which case the motor stops and the system unwinds under the natural expansion of the patient's chest (see col. 12, ll. 41-44). It seems that, in hindsight, one might impute a different meaning to Lach's holding circuit given knowledge of the Applicants' disclosure, but there is no evidence that one of skill in the art, without

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knowledge of the Applicant's disclosure, would disregard the standard meaning of a holding circuit and adopt a meaning the conforms to the Applicant's disclosure. The Examiner's understanding of the term, which appears to be that the holding circuit somehow operates the mechanical stops and motors to hold the motor in a stalled condition, is not apparently supported by the art, but if it is, the Applicant's seek any clarification supporting the Examiner's understanding of the term so that it may be addressed prior to a final office action.

The Office Action rejects claims 1 through 7, 9 and 18 as obvious over Lach, et al., Resuscitation Method and Apparatus, U.S. Patent 4,770,164 (Sep. 13, 1988) in view of Baldwin II, High Impulse Cardiopulmonary Resuscitator, U.S. Patent 6,171,267 (Jan. 9, 2001), citing Baldwins Figure 14.

Baldwin is not prior art, because it was filed well after the priority date of the current application. The Applicant's priority date is May 29, 1998 while Baldwin was filed on January 7, 1999. Nonetheless, Baldwin illustrates that the concept of high compression hold had not been disclosed by Lach.

Lach teaches away from the Applicant's claimed momentary hold. Lach indicates the application of rhythmic thoracic compressions needs to be carried out without interruption. (Col. 3, ll. 12-15.) Lach also indicates that cardiocirculatory forces must be applied and released abruptly which explains Lach's chosen design for his device. (Col. 3, ll. 9-12.) Momentary holding of the belt at a threshold of tightness is distinguishable from an abrupt release of the belt and is not taught in Lach. Lach's explanation of an abrupt release further illustrates his holding circuit operates as a typical holding circuit, and does not hold the belt in any particular position.

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The Applicant's claimed device offers unappreciated advantages over the proposed combination of Lach. Momentarily holding the belt at a threshold of tightness prolongs periods of high intrathoracic pressure improving the effectiveness of CPR. This benefit is not contemplated by Lach, but is confirmed in Baldwin.

Claims 10 through 17 as obvious over Lach in view of Smith, Portable Intermittent Orthopedic Device, U.S. Patent 3,385,847 (Sep. 17, 1974) under the assertion that Smith teaches slack take-up. Claims 10 through 17 should be allowable as dependent on allowable claim 1. However, the rejections do not address the limitations of claims 14 through 17.

Claim 19 is rejected as obvious over Lach in view of Smith, again under the assertions that Lach includes a brake means in the form of circuit interrupter and electrical holding circuit, and that Smith teaches automatic slack take-up.

Claims 1 through 7 and 9 through 18 are provisionally rejected on the basis of nonstatutory obviousness-type double patenting over co-pending U.S. App. 10/427,645. A terminal disclaimer is filed with this response. Withdrawal of this rejection is requested.

Claims 1 through 7 and 9 through 18 are provisionally rejected on the basis of nonstatutory obviousness-type double patenting in view of co-pending U.S. App. 11/464,806 in view of Baldwin. Baldwin is not prior art to the present application. Withdrawal of this rejection is requested.

Claims 1 through 7 and 9 through 18 are provisionally rejected on the basis of nonstatutory obviousness-type double patenting in view of co-pending U.S. App. 11/11/084,506 in view

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of Baldwin. Baldwin is not prior art to the present application. Withdrawal of this rejection is requested.

Conclusion

This response has addressed all of the Examiner's grounds for rejection. The rejections based on prior art have been traversed. Reconsideration of the rejections and allowance of the claims is requested.

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By: 

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